

VANCE (R. A.)

The radical cure of  
hip-joint disease.

---







Rec<sup>d</sup>. Nov. 10<sup>th</sup>. 1884.

From the author.

Vance, (R. A.)

G. O. Hildreth.

## THE RADICAL CURE OF HIP-JOINT DISEASE.

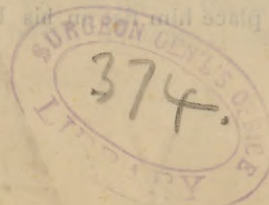
BY REUBEN A. VANCE, M. D., CLEVELAND, O.

Professor of Operative Surgery and Clinical Surgery in the Medical Department of the University  
of Wooster; Consulting Surgeon to Charity Hospital; Honorary Member of the  
Cincinnati Academy of Medicine, etc.

*Extracts from a Lecture delivered at the Joint Session of the N. E. O. and the N. C. O.  
Medical Associations, Akron, O., 1882.*

In introducing the subject of "The Radical Cure of Hip-joint Disease," I do so, well knowing that in order to state my conscientious convictions, I shall have to enunciate principles diametrically opposed to those advanced by the leading authorities on articular affections. Educated under the eye of one who to-day enjoys a world-wide reputation in this branch of Surgery, it would be far more agreeable for me to dilate upon the acknowledged skill of this admirable surgeon, than to place myself in opposition to him. For years his faithful follower, and as a medical teacher the zealous exponent of his peculiar views, it was only when I could no longer blind my eyes to the connection between the measures adopted and the unsuccessful results I attained, that I ventured to test the sufficiency of his principles and the merits of his practice. Then I saw, but too clearly, how incorrect was the pathology I had believed in, and how erroneous the treatment I had adopted.

Hip-joint disease commences in inflammation either of the joint, or of the osseous tissue near the articulation,—occasionally in both. These lesions are readily curable. The hip-joint, like every other articulation in health, is admirably fitted for the performance of its function—the resistance of pressure and the facilitation of motion. With disease of the hip comes inability to perform its normal offices; motion and pressure are as much restrained by voluntary effort as by reflex muscular contraction. If the joint be in any way moved, the nerves in and near the articulation are irritated, and irregular but powerful muscular movements are evoked. These muscular contractions force the diseased articular surfaces together and give to the extremity various characteristic positions. In a few cases synovitis of the hip-joint, or ostitis near the articulation, recovers spontaneously. In these cases one fact is always apparent: The joint is kept motionless with the leg and thigh fixed in one position—in these patients there is no muscular spasm, and none of the phenomena so common in cases where motion of the joint is permitted. If motion be permitted at the diseased joint, the evidences of synovial inflammation or bone disease are speedily supplemented by muscular spasm and excruciating pain. The various groups of muscles that unite the extremity to the trunk are called into action; the thigh is fixed in one position and flexed on the pelvis; and the head of the femur is violently forced against the upper and back part of the socket. With sleep comes an interruption of the control previously exercised over this part; spasmodic, intermittent contractions ensue, and develop the night pains so characteristic of progressive disease of the joint. In this way motion and pressure produce absorption of the opposed surfaces and cause purulent arthritis. Unfortunately, the foregoing phenomena are not limited to cases of morbus coxarius, running an unrestrained course—they may attend any case of hip-joint disease, during the treatment of which motion is permitted at the hip-joint.





Professor Lewis A. Sayre has identified himself with a system of articular therapeutics, in which motion of the inflamed joint surfaces, during treatment, is a cardinal principle, and his extensive attainments, great reputation and known ability, have caused this system to be adopted not only by the medical men of his own country, but by the profession in almost all parts of the civilized world. In view of this fact, I would ask you to consider Sayre's pathology of hip-joint disease before reviewing the treatment he advises for this affection:

Professor Sayre divides hip disease into three stages: one of irritation; a second of effusion; and a third of rupture of the capsule. In the first stage he says there is lameness, with flexure of thigh on pelvis; in the second, the capsule is distended with fluid, and, as a consequence of this distension, the limb is flexed, abducted, everted and apparently lengthened; while in the third, the capsule having ulcerated, or the acetabulum become perforated, the fluid is either effused into the tissues of the thigh, or discharged into the pelvic cavity—the limb becoming at once adducted, inverted and apparently shortened. Here certain positions of the extremity are ascribed to given anatomical conditions of the hip-joint. Is this correct? I say, most emphatically, that it is erroneous.—that these different positions are not due to the presence or absence of fluid in the hip-joint, but are wholly due to the influence of irritated nerves acting upon powerful muscles surrounding the upper end of the thigh. How can you test the truth of my statement? Readily enough: by aspirating a distended hip-joint the exact condition is produced that Sayre declares to be the essential element in converting his second into his third stage of hip-joint disease. If Sayre is correct, by aspirating the distended joint, the abducted, flexed, everted and lengthened extremity of his second stage should instantly become the adducted, flexed, inverted and shortened limb of his third stage. But in my hands aspiration has been demanded for the relief of a distended hip-joint, when the limb was flexed and everted, without causing any change in the position of the extremity; and, finally, I have resorted to it for the purpose of removing the fluid from the hip-joint of a patient whose thigh was flexed, adducted and inverted. In view of these facts—and, fortunately, they are such that any surgeon can test their accuracy himself—I am compelled to pronounce Professor Lewis A. Sayre's explanation of the mechanism of the physical phenomena of hip-joint disease demonstrably untrue, and his division of the stages of the affection contrary to the plain facts of Nature!

Every attentive student of pathology is aware that the joint structures of the body in health are non-sensitive; in disease, however, they are exquisitely sensitive. In health they are adapted for motion, and can withstand pressure; when inflamed the slightest movement induces excruciating pain. When a joint becomes diseased, Nature exerts all her powers to keep that joint absolutely motionless. The only machinery at her command is the muscles; these contract and hold the limb firm and the joint still. The position the limb assumes depends upon the relative strength of the various groups of muscles, and the extent to which the joint is implicated. A knowledge of these few facts furnishes invaluable aid in both diagnosis and treatment. By observing the course of cases in which no treatment—or what is exactly the same, a treatment that permits the joint surfaces to move upon each other—is adopted, it is seen that the joint becomes more and more flexed; that, up to a certain period, the angle of flexion corresponds with the duration of the disease; and that, although the apparent shortening and lengthening are due to the groups of muscles called into action, and the period they continue contracted, still it can be stated, as a fact of observation, that flexion of the thigh upon the abdomen, slight adduction and eversion accompany apparent lengthening of the extremity, and precede marked adduction, inversion and apparent shortening, just as in the order of clinical phenomena, apparent shortening precedes real shortening.

The diagnosis of Hip disease, after it has persisted for a length of time, is a very simple affair. Its recognition in an early stage is occasionally a difficult problem. It is a matter of vital moment to the patient to have the disease recognized early in its course, for in the hands of surgeons, guided by true principles, its cure is then a certain and simple matter. Fortunately, the rules for diagnosis are as easy of application, and as sure of success, as the principles of treatment are fixed and immutable. The manner in which the surgeon should proceed is as follows: Strip the patient, and place him flat on his back on a hard table covered with a sheet.



Arrange him so that the line which marks the junction of knees and feet, when the lower extremities are extended and in contact, if drawn upwards should bisect symphysis, navel and sternum; then, if one limb be flexed more than another, elevate the knee of the latter until both knees are together, and the two feet side by side. This done, note the position of the lumbar spine, and observe the effect of alternately depressing each knee until its popliteal space is in contact with the table, while its fellow remains flexed. The knee on the healthy side can be depressed without increasing the space between the spine and the table, but whenever the knee corresponding with the diseased hip is depressed the lumbar spine curves, and makes the space between it and the table greater. This points out the site of the disease, and indicates beyond question the hip affected. Then the surgeon grasps the healthy limb and flexes it so that the knee is in contact with the chest—this places the sacrum, the lumbar spine and back of the chest in the same line; while this position is maintained, the patient is urged to extend to the utmost the diseased limb—this he will be able to do in exact proportion to the length of time the disease has lasted, provided it has not been in existence more than one year. The angle the partially flexed extremity makes with the longitudinal axis of the body is a very important one, inasmuch as by simply measuring it the surgeon can approximate with great accuracy the course of the affection, and estimate with precision the duration of the malady during the first year of its existence.

While Nature aims to fix the joint and hold it as nearly motionless as possible—a procedure that effects a cure in a small minority of cases, it matters not what the surgeon does so he leaves the part at rest—yet the advantage gained is complicated, to a perilous degree, by dangers arising from the pressure together of the diseased surfaces. Nature strives to fix and hold in one position the diseased surfaces; the only mechanism at her command consists of groups of muscles varying in power and relative excitability, and agreeing in but one thing—in the degree of force with which they can make the femur press against the acetabulum. Consequently the longer Nature, unaided, is permitted to contend against synovitis, or ostitis and synovitis of the hip, the more will the articulation suffer, and the greater the danger of caries and prolonged suppuration. Until the joint gives way before the powerful compression of the irritated muscles—a lesion readily explicable when the influence of local inflammation is added to the effect of absorption from constant pressure—the position of the extremity will depend upon the comparative power of the opposing groups of muscles. Experience shows that for the first nine months the thigh becomes more and more flexed upon the pelvis; that the area of greatest disease passes from above gradually downward over the posterior superior quadrant of the circle of the acetabulum.

Nature here, as in so many other regions of the body, plainly indicates the character of the treatment that must be adopted to secure success. Let the surgeon do what Nature is vainly trying to do—fix the limb firmly in whatever position it chances to occupy—and at once all irregular muscular action ceases. With efficient fixation comes a tendency to extension of the thigh, for it is kept flexed by but two agencies, the action of the muscles and the ensheathing-callus-like influence of inflammatory exudation about the joint, and in a few days, with little effort, and no pain, the thigh is brought into line with the body and the extremity straightened. This done, but one other thing is needed for a radical cure; that is, to give the diseased part rest until resolution occurs. Fixation of the extremity and rest of the inflamed parts, are the principles upon which Nature cures hip-joint disease. Motion of the joint, by irritating the diseased surfaces, not only prevents repair, but by evoking excessive muscular action, may cause destruction of the articular structures.

How fare the various popular systems of treatment for hip-joint disease, when brought to the bar of Nature and tested by Nature's principles? Look at the hip-joint appliances known by the names of Davis, Sayre, Bauer, Hutchinson, Andrews or Taylor. The splints devised by these surgeons are all designed to favor that which Nature strives to check—motion at the hip. How is it with extension by weight and pulley, the foot of the bed being elevated and the weight of the body acting as a counter-extending force? Nothing could thwart Nature more effectually



unless it be the above splints; the latter permit the diseased surfaces to move, thus exciting muscular spasm; the former acts directly upon the muscles and evokes reflex contractions; in both, Nature's endeavor to fix the joint is foiled. In one respect extension by weight and pulley is less disastrous than splints permitting motion—the application of the former necessitates confinement to bed, and despite the injury arising from constant stimulation of the muscles, the recumbent posture and incidental rest in a measure counteract the harm done. In so far as the popular mechanical treatment of the day permits motion at the hip, or employs extension, its effect is injurious to the patient. The appliance of greatest benefit to the patient is one that fixes the extremity and holds the joint motionless. *What a diseased joint wants is just what a fractured bone needs—EFFICIENT, ENFORCED and SUFFICIENT REST!*

This all-important rest can be obtained for the hip by appliances based upon the principle of either lateral fixation, or posterior fixation—preferably the latter. In apportioning apparatus to an extremity, and determining the kind of fixation and the degree of rest necessary for the cure of hip-joint disease, each case must be judged upon its own merits. Take a patient with morbus coxarius at any stage, and treat him upon the principle just set forth, and he will recover with a rapidity unknown to any other method. Not only that: this treatment will cure patients whose cases will resist all other therapeutical procedures.

In order to secure such results, certain details that can only be briefly alluded to here, must be carefully attended to. If the synovial cavity contain fluid, it must be removed; if the leg is flexed on the thigh and the thigh on the body, the deformity must be relieved, and, finally, the fixation must be maintained and the rest continued, not only until all tenderness disappears and all inflammation subsides, but until all the callus-like induration about the joint has been absorbed. In order to dispose of fluids that accumulate in the joint, the aspirator can be resorted to. There is but one rule to guide the surgeon in this matter; the joint is to be kept free from liquid effusions, and the aspirator should be used sufficiently often to attain this end. The influence of reflex muscular contraction in producing the deformity characteristic of this affection has been sufficiently dwelt upon; the surgeon who will apply a posterior fixation splint to one of these extreme cases, will have an opportunity of noting the fact that, *so soon as his apparatus relieves the tense muscles THE WEIGHT OF THE LIMB AT ONCE TENDS TO STRAIGHTEN THE EXTREMITY AND RELIEVE THE DEFORMITY.* If his splint is one that can be moulded to the part as the extremity extends itself, no other influence than fixation and rest will be required to restore the parts to an extended position. The joint freed from effusion and the limb relieved of deformity, the posterior fixation appliance should be worn by the patient until all pain has disappeared from the joint. The recumbent posture that the patient assumed when the apparatus was first applied, and which has been continuously maintained thus far, should not be deviated from until no reasonable amount of manipulation of the diseased articulation excites pain in or around the joint. When this state has been attained the splint can be removed, but the patient should still keep his bed. It will frequently happen that even after the joint has recovered, a certain amount of the inflammatory induration—one of Nature's conservative provisions to limit motion in cases of articular disease—early effused, still remains and demands the stimulus incident to commencing motion of the joint for its absorption. If the joint has recovered, a few weeks of recumbency without fixation-splint suffices for the removal of the induration about the joint and the restoration of motion at the hip. Should the induration persist, or should it disappear without the articulation recovering its freedom of motion, *more or less disease of the joint remains and the splint should be reapplied.*

Above all things, do not call this "Fibrous Anchylosis," or "False Anchylosis," and try to cure it by passive motion. As well endeavor to cure vascular keratitis by putting sand in the eye! The "stiff" joint that follows articular inflammation is an uncured joint, and the only true method of relief is to reapply your fixation-splint, and give it that rest which Nature demands as the condition of its cure.





